

# The Clinical Traineeship Program Of the National Cancer Institute

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**P**ARALLELING the increase in the magnitude of the cancer problem throughout recent years there has been an urgent and growing need for more physicians trained in the detection, diagnosis, and treatment of neoplastic diseases. Recognizing this need, the National Cancer Institute of the Public Health Service in 1938 initiated a clinical traineeship program under which graduate physicians could receive special training in cancer management.

These trainees were placed in medical schools, hospitals, and training centers where suitable cancer teaching material, as well as qualified professional staffs, was available, and acceptable training facilities could be provided. In order to provide the trainee an opportunity to select his own training center, and the training institution the opportunity to select its own trainees, the applicant is required to make his own arrangements with an acceptable institution before the traineeship request is considered. Applications submitted to the National Cancer Institute upon completion of such arrangements are considered by a board which awards the traineeships.

In the early years of the program, the trainee

received a stipend of \$6 a day; however, with changing economic conditions this stipend has been gradually increased to \$10 a day, or a maximum of \$3,600 annually.

The number of appointments, including renewals, has ranged from 3 during the fiscal year 1938 to 143 in the fiscal year 1954. Initially, only a small number of physicians could be appointed because of the limited appropriations available to the institute. Although, in time, the number was gradually increased, it was restricted during the war years owing to lack of suitable applicants. Since the close of World War II, the number has expanded considerably.

Among the objectives of the traineeship program are (a) the recruitment of more and better trained physicians to the cancer field; (b) the provision of competent physicians in the various branches of medicine concerned with cancer care around whom clinics and services may be organized; and (c) the provision of better care for the cancer patient.

## Survey of Program

Questionnaires were sent in 1953 to all trainees who had completed their participation in the program prior to July 1953. The elapsed time between completion of the traineeship and the date of reply to the questionnaire ranges from a few months to approximately 15 years. This variation in elapsed time obviously has a direct bearing on the stage of career development of the particular individual as well as a direct relationship to an estimate of the accomplishment of the program at a given moment.

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As of June 30, 1953, 451 physicians had received support under this program. Questionnaires were sent to all 451; only 53 percent of the total responded, however. Among the reasons for failure to reply are inaccurate addresses, continuation of the individual's training under other sponsorship, entry into the armed services, and, possibly in some instances, merely inertia on the part of the trainee.

This study is therefore based on the replies received from 237 individuals (231 men and 6 women). The incompleteness of this response is recognized, as are other limitations of the questionnaire method. However, these data are intended as a factual report on the activities of those individuals who did respond and are considered a representative sample which reflects

significant trends of the accomplishments under the program.

### Qualifications of Trainees

The minimum requirements for traineeships are graduation from an approved medical school and at least 1 year of rotating internship. All of the 237 trainees offered experience exceeding these requirements. Seventy-six had up to 1 year of postgraduate training prior to participation in the traineeship program; 62 trainees had 1½ to 2 years; 80 had 3 years; 17 had 4 years; and 2 had more than 4 years. Of the 237 trainees in this study, 129 had military service of varying periods. A portion of this military training included postgraduate train-

**Distribution of cancer trainees at 53 training centers**

State	Hospital	Number of trainees	State	Hospital	Number of trainees
California.....	University of California Hospital.	10	Missouri.....	Washington University.....	5
	Stanford University Hospital.	3		Ellis Fischel State Cancer Hospital.	5
Connecticut.....	Yale University School of Medicine.	3	New York.....	Barnard Free Skin and Cancer Hospital.	5
District of Columbia.	George Washington University.	2		St. Louis University.....	1
	Georgetown University.....	2		Memorial Hospital.....	59
Georgia.....	Emory University Hospital.	1		Bellevue Hospital.....	13
	Illinois.....	Chicago Tumor Institute.	3	Columbia University Hospitals.	10
Michael Reese Hospital.		3	Mount Sinai Hospital....	2	
University of Illinois.....		2	Montefiore Hospital.....	2	
Provident Hospital and Training School.		2	Presbyterian Hospital....	1	
Iowa.....	University of Chicago.....	1	University of Rochester..	1	
	State University of Iowa.	1	Duke University.....	5	
Kansas.....	University of Kansas Medical Center.	4	North Carolina..	North Carolina Baptist Hospital.	2
	Kentucky.....	Norton Memorial Infirmary.	1	Bowman Gray School of Medicine.	1
Massachusetts...		Massachusetts General Hospital.	4	Ohio.....	Cincinnati General Hospital.
	Peter Bent Brigham Hospital.	3	Western Reserve University.		2
	New England Deaconess Hospital.	2	Oregon.....	University of Oregon.....	1
	Massachusetts Memorial Hospital.	2		Pennsylvania....	University of Pennsylvania.
	Lahey Clinic.....	1	American Oncologic Hospital.	3	
	Pondville Hospital.....	1	Philadelphia General Hospital.	2	
	Massachusetts Eye and Ear Infirmary.	1	Jeanes Hospital.....	1	
	Maryland.....	University of Maryland..	6	Presbyterian Hospital....	1
		Johns Hopkins Hospital..	2	Jefferson Medical College.	1
	Michigan.....	University of Michigan..	10	Tennessee.....	University of Tennessee..
Wayne University.....		1	Texas.....	Nix Hospital.....	1
Minnesota.....	University of Minnesota..	17	Virginia.....	Medical College of Virginia.	1
			Washington.....	Swedish Hospital.....	1
			Total.....		237

ing, the duration of which is difficult to estimate.

In general, trainees are appointed for a 1-year period with the opportunity for two 1-year renewals, if extended additional training is desired. Appointments are continued on demonstration of satisfactory performance. The length of traineeship for the physicians in the study group is as follows:

<i>Period (months)</i>	<i>Number of trainees</i>	<i>Period (months)</i>	<i>Number of trainees</i>
Under 6	2	24	37
6	9	27	9
9	18	30	18
12	86	33	5
15	9	36	33
18	4		
21	3		
		<b>Total</b>	<b>237</b>

It will be noted that 29 of this group received traineeships of less than 1 year. The major reason for this short period of participation was a call to military service. Others were offered positions before the end of their appointments; a few wanted only a short period of training as a refresher following military service or to fulfill specialty board requirements; and a still smaller number were forced to discontinue training because of personal economic circumstances.

The major reason for continuance among those participating in the program for 1 to 3 years was a desire for more extensive cancer training and to meet requirements for the various medical specialty boards concerned with the cancer problem. When the length of traineeship is considered in conjunction with the pretraineeship experience of these physicians, a reasonably complete picture of their postgraduate training can be obtained. The study shows that 138 of the group had at least 5 years of postgraduate training at the time they completed their traineeships, and 99 had 5 to 10 years of training.

### Training Centers

Obviously, this program is dependent on the cooperation of the teaching hospitals, medical centers, and teaching institutions of the Nation. Throughout the years of the program's existence, there has been wholehearted cooperation

on the part of such organizations. At the inception of the program, only a limited number of institutions were available to provide cancer training, and these were largely centered in the eastern portion of the country. In the first year, trainees were placed in 3 institutions. As the program continued, additional centers were able to provide cancer training so that in this study trainees were distributed in 53 training centers as shown in the table on p. 777.

### Location of Trainees

Of the trainees in this study, 72 remained in the general area of their training center on completion of postgraduate work, and 165 located in areas away from their training centers. The distribution of the trainees, by State, is as follows:

<i>Location</i>	<i>Number of trainees</i>	<i>Location</i>	<i>Number of trainees</i>
Alabama	1	Nebraska	1
California	31	New Jersey	5
Colorado	2	New Mexico	1
Connecticut	5	New York	37
District of Columbia	8	North Carolina	9
Florida	1	Ohio	12
Georgia	2	Oklahoma	4
Idaho	1	Oregon	2
Illinois	6	Pennsylvania	9
Indiana	2	South Carolina	1
Iowa	3	South Dakota	1
Kansas	4	Tennessee	4
Kentucky	5	Texas	12
Louisiana	2	Utah	3
Maryland	8	Virginia	6
Massachusetts	9	Washington	8
Michigan	6	West Virginia	1
Minnesota	9	Wisconsin	1
Missouri	12	Hawaii	2
Montana	1		
		<b>Total</b>	<b>237</b>

Thus, it will be seen that a majority of the States received the benefit of trained physicians locating within their borders.

Each trainee at the time of his appointment has indicated his intention to engage in some phase of cancer work on completion of his training. Although there is no mandatory requirement that the trainee continue in the cancer field, it will be noted in the results of the program which follow that the majority of trainees are carrying out their original intentions.

One hundred and seventy-four of the 237 trainees reported they had completed American board specialty examinations, and 61 reported they were board eligible and in the process of obtaining board certification. Four of the trainees, 2 of whom had obtained board certification, indicated they had decided to pursue careers in cancer research. Distribution of trainees in the various specialty groups is as follows:

*Board certified*

Surgery -----	79
Radiology -----	66
Pathology -----	22
Obstetrics and gynecology -----	6
Ophthalmology -----	1
<b>Total -----</b>	<b>174</b>

*Board eligible and in process of certification*

Surgery -----	30
Radiology -----	7
Pathology -----	10
Obstetrics and gynecology -----	5
Internal medicine -----	7
Urology -----	1
Physical medicine and rehabilitation -----	1
Research (already certified) -----	2
<b>Total -----</b>	<b>63</b>

**Teaching Activities**

One hundred and seventeen, or approximately 50 percent of the trainees responding to the questionnaire, indicated they were engaged in cancer teaching activities in medical schools at various academic levels. Seven of the group are cancer coordinators under the institute's undergraduate cancer teaching program. The following table reflects the teaching appointments held by trainees in this study:

<i>Academic level</i>	<i>Number of appointments</i>
Professor -----	6
Associate professor -----	17
Assistant professor -----	12
Senior instructor -----	2
Instructor -----	70
Associate instructor -----	3
Assistant instructor -----	3
Instructor for cancer research -----	4
<b>Total -----</b>	<b>117</b>

**Cancer Services**

Fourteen trainees have helped organize and establish new cancer clinics in their areas. One hundred and twenty-nine are members of the staffs of cancer clinics, and an additional 23 are directors of cancer clinics or chairmen of tumor boards. Seventeen are members of the staffs of detection centers, and 2 additional trainees are directors of detection centers. While some of these trainees were associated with more than 1 clinic or more than 1 type of cancer service, for purposes of this study they have been enumerated only once. A total of 171 were engaged in at least 1 such type of service activity. None of the trainees has gone into State or local health department cancer programs.

**Hospital Staff Appointments**

All but 2 of the trainees were associated with the staff of at least 1 hospital, and the majority held staff positions at several hospitals in their local area. Of the 2 exceptions, 1 died during the course of this study, and the second is a woman physician who gave up active medical practice because of family responsibilities.

**Time Devoted to Cancer Work**

A majority of the trainees are devoting a considerable proportion of their time to work with cancer patients. This statement is based on the data presented above indicating the trainees' associations with cancer teaching and cancer services plus an estimate by each of the trainees of the time spent on cancer work. This information is summarized as follows:

<i>Time spent</i>	<i>Percent</i>
Total -----	17.0
One-half -----	33.0
One-quarter to one-half -----	28.0
Less than one-quarter -----	21.5
Little or none -----	.5

**Present Status of Program**

In the fiscal year 1954, 140 physicians received appointments, approximately 59 percent of the number of qualified applicants sub-

mitting applications for training. Fiscal year 1954 trainees were distributed in specialty training as follows:

Radiology .....	49
Surgery .....	40
Pathology .....	33
Internal medicine.....	8
Obstetrics and gynecology.....	7
Hematology.....	1
Urology .....	1
Otolaryngology.....	1

### Conclusions

To some extent, this analysis provides a means of evaluating the clinical traineeship program of the National Cancer Institute during the period 1938 to 1953. Data obtained from 237 trainees out of a total of 451 who completed their training indicate that at least 50 percent are devoting 50 to 100 percent of their time to cancer work; 49 percent are engaged in cancer teaching; and 72 percent are serving on the staffs of cancer clinics or detection centers. Cancer clinic facilities have been augmented as a result of the program.

Physicians who have completed these traineeships have become more proficient in the diagnosis and treatment of cancer. This is reflected in the fact that 73 percent have become diplomates of American specialty boards, and the remainder (27 percent) are either board eligible or in the process of board certification.

Of the former trainees who can be considered permanently located, 70 percent have established themselves in areas away from their training centers, thus providing cancer service to many different parts of the country.

The program has attracted a significant number of physicians to the cancer field who would not have entered it without the aid of this program. As a consequence, the program has been helpful in partially meeting the tremendous need for physicians trained in the various specialties vitally important to adequate management of the cancer case.

The need for better training in the cancer field is generally recognized, and this program affords a means of providing training which will eventually enable the general public in all sections of the country to receive better cancer services.

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## Sodium Content on Dietary Food Labels

New regulations under the Federal Food, Drug, and Cosmetics Act, requiring the labels of "salt free" or "low sodium" food products for dietary use to declare sodium content in milligrams of sodium per 100 mg. of the food and per average serving, will go into effect on September 29, 1954. The "average serving" is required to be expressed in common terms, such as number of slices, cookies, or wafers, or in cupfuls, tablespoonfuls, or teaspoonfuls.

In recent years, the increase in packing of special foods for persons suffering from high-blood pressure and certain types of heart, liver, and kidney diseases has been accompanied by variation and confusion in labeling terminology. Many products labeled "salt free" or "no added salt" contained substantial amounts of sodium, sometimes naturally present in the food, sometimes added in the form of baking powder or other ingredients.